L Number	Hits	Search Text	DB	Time stamp
1	205	toxicant same (dissociat$4 or inhibit$4) same (binding or bind or bound)	USPAT; US-PGPUB; EPO; DERWENT	2004/08/24 12:09
2	2	toxicant same (dissociat$4 or inhibit$4) same (binding or bind or bound) same immobili$4	USPAT; US-PGPUB; EPO; DERWENT	2004/08/24 12:13
3	2	toxicant same (dissociat$4 or inhibit$4 or reduc$5 or prevent$4) same (binding or bind or bound) same immobili$4	USPAT; US-PGPUB; EPO; DERWENT	2004/08/24 12:14
4	7	toxicant same (dissociat$4 or inhibit$4 or reduc$5 or prevent$4) same immobili$4	USPAT; US-PGPUB; EPO; DERWENT	2004/08/24 12:14

8/24/04

'EVENTLINE' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
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specify a corrected file name or you can enter "IGNORE" to continue
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FILE 'AGRICOLA' ENTERED AT 12:36:12 ON 24 AUG 2004

FILE 'BIOTECHNO' ENTERED AT 12:36:12 ON 24 AUG 2004

8/24/04

FILE 'CONFSCI' ENTERED AT 12:36:12 ON 24 AUG 2004

FILE 'HEALSAFE' ENTERED AT 12:36:12 ON 24 AUG 2004

FILE 'IMSDRUGCONF' ENTERED AT 12:36:12 ON 24 AUG 2004

FILE 'LIFESCI' ENTERED AT 12:36:12 ON 24 AUG 2004

FILE 'MEDICONF' ENTERED AT 12:36:12 ON 24 AUG 2004

FILE 'PASCAL' ENTERED AT 12:36:12 ON 24 AUG 2004

=> toxicant and (dissociate or dissociation or inhibit or prevent or reduction or reduced or reduce) and (immobilized or immobilization or immobilizing)
L1 2 FILE AGRICOLA
L2 4 FILE BIOTECHNO
L3 0 FILE CONFSCI
L4 0 FILE HEALSAFE
L5 0 FILE IMSDRUGCONF
L6 3 FILE LIFESCI
L7 0 FILE MEDICONF
L8 1 FILE PASCAL

TOTAL FOR ALL FILES
L9 10 TOXICANT AND (DISSOCIATE OR DISSOCIATION OR INHIBIT OR PREVENT OR REDUCTION OR REDUCED OR REDUCE) AND (IMMOBILIZED OR IMMOBILIZATION OR IMMOBILIZING)

=> dup rem
ENTER L# LIST OR (END):l9
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L9
L10 6 DUP REM L9 (4 DUPLICATES REMOVED)

=> d l10 ibib abs total

L10 ANSWER 1 OF 6 LIFESCI COPYRIGHT 2004 CSA on STN

ACCESSION NUMBER: 2002:53344 LIFESCI
TITLE: Embryonic development assay with Daphnia magna: application to toxicity of aniline derivatives
AUTHOR: Abe, Tatsuo; Saito, Hotaka*; Niikura, Yoshiyuki; Shigeoka, Tadayoshi; Nakano, Yoshio
CORPORATE SOURCE: Department of Environmental Chemistry and Engineering, Tokyo Institute of Technology, 4259 Nagatsuta-cho, Midori-ku, Yokohama 226-8502, Japan; E-mail: gfs@ankaken.co.jp
SOURCE: Chemosphere, (20011100) vol. 45, no. 4-5, pp. 487-495. ISSN: 0045-6535.
DOCUMENT TYPE: Journal
FILE SEGMENT: X
LANGUAGE: English
SUMMARY LANGUAGE: English

AB An assay system using Daphnia magna embryos was applied to investigate the adverse effects of aniline derivatives. The data were compared with our previous data for chlorophenols. This new assay provides useful information to evaluate the toxicity of chemicals and the differences in sensitivity between the life stages. The effects of 15 aniline derivatives on embryonic development of D. magna embryos were determined. At the start of exposure, 2-6-h old eggs (between stages 1 and 2, round in shape, diameter approx. 400 mu m), were used. In control and solvent control groups, embryonic development from an egg to a free-swimming animal proceeded completely within 3 days with more than 90% hatchability. Median effective concentrations (EC sub(50)s) to **reduce** the numbers hatched were determined and gross morphological abnormalities of hatched animals recorded. Anilines induced no obvious morphological abnormalities and no developmental delay although premature deaths occurred. However, they affected the number of embryos hatching in a dose-dependent manner. In addition, this embryo assay was more sensitive to aniline derivatives (except for aniline) than acute juveniles **immobilization** assay. Ratios of 48-h EC sub(50) (juvenile)/3-day EC sub(50) (embryo) for eight anilines were greater than 5.0. Particularly, the ratios of 4-methyl-, 4-ethyl- and 3-methylaniline were 77, 23 and 11, respectively. EC sub(50)s for embryos and juveniles were poorly correlated (r = 0.41). This indicated that the sensitivities of the two life stages were different to the effects of anilines. EC sub(50)s were poorly correlated (r = -0.097) with the log K sub(ow) (1-octanol/water partition coefficient). These results were compared with previous results for phenols.

L10 ANSWER 2 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 1

ACCESSION NUMBER: 2000:65945 AGRICOLA
DOCUMENT NUMBER: IND22059087
TITLE: In vitro phytotoxicity screening test using **immobilized** spinach thylakoids.
AUTHOR(S): Laberge, D.; Chartrand, J.; Rouillon, R.; Carpentier, R.
AVAILABILITY: DNAL (QH545.A1E58)
SOURCE: Environmental toxicology and chemistry, Dec 1999. Vol. 18, No. 12. p. 2851-2858
Publisher: Pensacola, Fla. : SETAC Press.
CODEN: ETOCDK; ISSN: 0730-7268
NOTE: Includes references
PUB. COUNTRY: Florida; United States
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

AB Several pollutants found in water **inhibit** the photosynthetic electron transport chain, and therefore affect the growth of phytoplankton and aquatic plants. In this study, thylakoid membranes isolated from

spinach leaves were used in a microelectrochemical cell to generate photocurrent. The toxic effect of an inhibitor is observed by a decrease in the photocurrent. To improve the stability of their biological functions, the thylakoid membranes were **immobilized** in an albumin-glutaraldehyde cross-linked matrix. The developmental work of this phytotoxicity test was done by using the herbicide atrazine as the reference **toxicant**. Results on reproducibility were in the range generally accepted for standardized bioassays. The phytotoxicity of herbicides from various chemical classes including photosynthetic and nonphotosynthetic inhibitors was evaluated. Toxicity responses of the **immobilized** thylakoid test to photosynthetic inhibitors compared favorably with literature data for the algal growth inhibition test using Selenastrum capricornutum. The detection capabilities of the photosynthetic microassay for cyanazine, metribuzin, diuron, and propanil met the recommandation for the water quality guidelines for raw water. Characteristics of this in vitro approach such as rapidity, experimental simplicity, and cost effectiveness are also discussed.

L10 ANSWER 3 OF 6 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1997:28326014 BIOTECHNO
TITLE: Effects of **immobilization** restraint on syrian golden hamsters
AUTHOR: King-Herbert A.P.; Hesterburg T.W.; Thevenaz P.P.; Hamm T.E. Jr.; Moss O.R.; Janszen D.B.; Everitt J.I.
CORPORATE SOURCE: Dr. A.P. King-Herbert, CIIT, P.O. Box 12137, Research Triangle Park, NC 27709, United States.
SOURCE: Laboratory Animal Science, (1997), 47/4 (362-366), 14 reference(s)
CODEN: LBASAE ISSN: 0023-6764
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1997:28326014 BIOTECHNO
AB Rodent nose-only inhalation toxicology systems comprise whole-body **immobilization** in plastic restraint tubes. This method of restraint is known to have a variety of effects on animals. In the studies reported here, two independent toxicology laboratories examined the effects of inhalation tube restraint in Syrian golden hamsters, a species that has recently gained importance in inhalation studies of fibrous particulates. Body weight, food and water consumption, core body temperature, and plasma cortisol and corticosterone concentrations were assessed in animals **immobilized** in nose- only inhalation tubes, and the results were compared with those from unrestrained cage-control animals. Animals were **immobilized** for either 6 h/ day, 5 days/week for 13 weeks (subchronic), or 4 h/day for 14 consecutive days (subacute), mimicking exposure conditions commonly used in nose-only inhalation studies. Tube restraint was found to induce a marked decrease in body weight, which increased in response to cessation of restraint. The body weight decrement was associated with significant differences in food and water consumption between the restrained and control groups in the subacute study and only food consumption in the subchronic study. During the restraint period, core body temperature in the **immobilized** animals increased slightly but not above the normal range for this species. Plasma cortisol and corticosterone concentrations were not significantly increased with use of restraint, compared with values in controls. **Immobilization**-associated body weight depression in Syrian golden hamsters is important for the evaluation of nose-only inhalation study results because many normal physiologic parameters, as well as **toxicant**-induced effects, are associated with body weight status.

L10 ANSWER 4 OF 6 LIFESCI COPYRIGHT 2004 CSA on STN
ACCESSION NUMBER: 97:97582 LIFESCI

TITLE: Ecotoxicity assessment of the aquatic environment around Lake Kojima, Japan
AUTHOR: Okamura, H.; Luo, R.; Aoyama, I.; Liu, D.
CORPORATE SOURCE: Res. Inst. for Bioresources, Okayama Univ., 2-20-1 Chuo, Kurashiki, Okayama 710, Japan
SOURCE: ENVIRON. TOXICOL. WATER QUAL., (1996) vol. 11, no. 3, pp. 213-221.
Meeting Info.: 7. International Symposium on Toxicity Assessment. [np].
ISSN: 1053-4725.
DOCUMENT TYPE: Journal
TREATMENT CODE: Conference
FILE SEGMENT: X; K
LANGUAGE: English
SUMMARY LANGUAGE: English

AB To **reduce** the impact of chemical substances on the aquatic ecosystem, it is essential to understand their ecotoxicological properties in the natural aquatic environment. Consequently, we conducted an ecotoxicological study on the aquatic environment around Lake Kojima, a man-made lake located in the southwest of Japan. Lake Kojima receives its chemical inputs mainly from two rivers that flow through various agricultural and industrial areas. For ecotoxicity screening, surface water and sediment samples were collected 4 times in 1993 from 16 preselected sites. Then, the solutes in the filtered surface water were concentrated by ODS resin, and the organic chemicals in the suspended solids (SS) and sediments were extracted by acetone. A battery of five ecotoxicity tests (agar plate test using bacteria and yeast, algal growth inhibition test. Daphnia magna **immobilization** test, and root elongation test using lettuce seeds) was used to assess these extracts. The results show that the surface water extracts had a lethal effect on D. magna, the SS extracts suppressed algal growth, and the sediment extracts were inhibitory to the growth of yeast. A significant inhibitory effect by the sediment extracts from 4 lake sites and 3 river sites was detected by these ecotoxicity tests. Attempts also were made to identify the putative ecotoxic chemicals in the collected samples. Elementary sulfur was identified as one of the major **toxicants** in the sediment extracts that were inhibitory to the yeast growth. Moreover, samples of surface water around Lake Kojima, collected weekly from June to September in 1994, were found to contain three pesticides and were toxic to D. magna. But the concentration of the pesticides detected was too low to cause Daphnia **immobilization**. It is believed that the toxicity of the water extracts was mainly due to the combined toxic effect of natural and man-made components.

L10 ANSWER 5 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2

ACCESSION NUMBER: 94:9318 AGRICOLA
DOCUMENT NUMBER: IND20367004
TITLE: Toxicity of tributyltin chloride to anaerobic nitrogen transformations in sediment and porewater.
AUTHOR(S): Bergeron, V.; Blais, J.S.; Wharf, I.; Marshall, W.D.
AVAILABILITY: DNAL (QH540.J6)
SOURCE: Journal of environmental quality, July/Sept 1993. Vol. 22, No. 3. p. 528-536
Publisher: Madison : American Society Of Agronomy,
CODEN: JEVQAA; ISSN: 0047-2425
NOTE: Paper presented at the USDA-ARS Beltsville Agricultural Research Center Symposium XVII, "Agricultural Water Quality Priorities, A Team Approach to Conserving Natural Resources," May 4-8, 1992, Beltsville, MD.
Includes references

PUB. COUNTRY: United States; Wisconsin
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

AB The influence of tributyltin chloride (TBTCI) on N transformations in anoxic sediment cultures, during approximately 14-d incubations, was studied using acetylene inhibition and acetylene **reduction** techniques as measures of microbially mediated denitrification and dinitrogen fixation, respectively. The accumulation of N2O, CO2 and C2H4 with time was modeled with a best-fit polynomial to detect statistically significant differences between treatments and with a three-segment continuous line model to assess lag times, rates of accumulation and rates of subsequent loss of these gases from the headspace. In sediment cultures, the presence of up to 100 mg L-1 of TBT had a barely detectable influence on these transformation. However, the analogous processes in porewater, prepared by centrifuging sediment slurry at 3 000 X g for 30 min, were appreciably modified by the presence of > 1 mg L-1 of this **toxicant**. Although the two media were different in terms of their denitrifying potential and their fermenting capacity, dose-related responses in the porewater were evident for both processes. Apparently the presence of particulate matter in the sediment slurry appreciably attenuated the inhibitory effects of the **toxicant**. Moreover, a portion of the denitrifiers in cultures of porewater developed a resistance to 100 mg L-1 of TBT in the medium and **reduced** added nitrate stoichiometrically. When transferred to autoclaved medium containing the same level of **toxicant**, aliquots of the resistant culture stoichiometrically **reduced** the added nitrate after a shorter lag time. The resistance was not the result of metabolic detoxification as indicated by the recovery of 74% of **toxicant** in an unchanged form, after 15 d incubation, using analytical methods which would have detected a 1% conversion of TBT to either Bu2Sn2+ or to BuSn3+. When added, at 10 mg L-1, to autoclaved porewater, an appreciable portion of the **toxicant** became associated with residual particulate matter (the fraction removed by centrifugation at 10 000 X g but not by 3 000 X g) with only approximately 9% remaining in the supernatant fluid. When 0.5 mL of TBT-resistant culture was added to the identical matrix and incubated, the TBT in the supernatant phase was **reduced** below the limit of detection and only 40% was recovered in the particulate/microbial cell fraction. Thus, both particulate materials and microbial growth **immobilized** TBT serving to limit its concentration in the surrounding water.

L10 ANSWER 6 OF 6 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 1991:21345696 BIOTECHNO
TITLE: **Immobilized** microbe bioreactors for waste water treatment
AUTHOR: Portier R.J.; Miller G.P.
CORPORATE SOURCE: Aquatic/Industrial Toxicology Laboratories, Institute for Environmental Studies, Louisiana State University, Baton Rouge, LA 70803, United States.
SOURCE: Waste Management and Research, (1991), 9/5 (445-451)
CODEN: WMARD8 ISSN: 0734-242X
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 1991:21345696 BIOTECHNO

AB The application of adapted microbial populations **immobilized** on a porous diatomaceous earth carrier to pre-treat and **reduce** toxic concentration of volatile organics, pesticides, petroleum aliphatics and aromatics has been demonstrated for several industrial sites. In the pre-treatment of industrial effluents and contaminated ground-waters, these bioreactors have been used to optimize and

reduce the cost of conventional treatment systems, i.e. steam stripping, carbon adsorption and traditional biotreatment. Additionally, these systems have been employed as seeding devices for larger biotreatment systems. The cost effective utilization of an **immobilized** microbe reactor system for water supply regeneration in a microgravity environment is presented. The feasibility of using **immobilized** biomass reactors as an effluent treatment technology for the biotransformation and biodegradation of phenols, chlorinated halocarbons, residual oils and lubricants was evaluated. Primary biotransformation tests of two benchmark **toxicants**, phenol and ethylene dichloride at concentrations expected in life support effluents were conducted. Biocatalyst supports were evaluated for colonization potential, surface and structural integrity, and performance in continuous flow bioreactors. The implementation of such approaches in space will be outlined and specific areas for interfacing with other non-biological treatment approaches will be considered for advanced life support, tertiary waste water biotreatment.